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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,588	11/30/2001	Glenn J. Dorin	012441.00013	3451
22907	7590	04/28/2004	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			MITRA, RITA	
		ART UNIT	PAPER NUMBER	
		1653		

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Rita Mitra

1653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 30 November 2001.  
2a) This action is FINAL.                    2b) This action is non-final.  
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 71-262 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) Claim(s) \_\_\_\_\_ is/are allowed.  
6) Claim(s) \_\_\_\_\_ is/are rejected.  
7) Claim(s) \_\_\_\_\_ is/are objected to.  
8) Claim(s) 71-262 are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

## **DETAILED ACTION**

Applicants' preliminary amendment filed on November 30, 2001 is acknowledged. Amendment to specification is noted. Claims 1-70 have been canceled. New claims 71-262 have been added and entered. Therefore, claims 71-262 are currently pending.

### ***Election/Restriction***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I.      Claims 71-128 directed to a solution/ composition having a pH of from 5 to 10, comprising from 200 mM arginine to 300 mM arginine, and further comprising a polypeptide selected from the group consisting of (i) human TFPI having the amino acid sequence shown in Fig. 4, (ii) ala-human TFPI having the amino acid sequence shown in Fig 4 and having one further amino acid which is an amino terminal alanine, and (iii) muteins of (i) or (ii) having from 1 to 5 amino acid substitutions, wherein the solution further comprising a solubilizer; classified in class 530, subclass 350; class 514, subclass 2, class 435, subclass 440+.
  
- II.     Claims 129-178 directed to a method of increasing the solubility of a polypeptide and to aid in refolding a polypeptide, selected from the group consisting of (i) human TFPI having the amino acid sequence shown in Fig. 4, (ii) ala-human TFPI having the amino acid sequence shown in Fig 4 and having one further amino acid which is an amino terminal alanine, and (iii) muteins of (i) or (ii) having from 1 to 5 amino acid substitutions, wherein the composition further comprising a charged polymer (a solubilizer), wherein purifying the polypeptide using a method of ion exchange and hydrophobic interaction chromatography, wherein the method uses cationic polymer to a solution comprising a soluble form of a

recombinant polypeptide, to precipitate bacterial contaminants from a recombinant polypeptide expressed in bacteria; classified in class 530, subclass 350, 416; class 514, subclass 2; class 435, subclass 69.1, 320.1, 252.3, 440+; class 536, subclass 23.5

III. Claims 179-262 directed to a method of purifying a polypeptide expressed in *E. coli*, wherein said polypeptide, selected from the group consisting of (i) full length, properly folded human TFPI having the amino acid sequence shown in Fig. 4, (ii) full length, properly folded ala-human TFPI having the amino acid sequence shown in Fig 4 and having one further amino acid which is an amino terminal alanine, and (iii) a full length, properly folded mutein selected from the group consisting of muteins having from 1 to 5 amino acid substitutions, wherein the said polypeptide is purified using a method of ion exchange and/or hydrophobic interaction chromatography, and/or PEG precipitation; classified in class 530, subclass 350, 416, 421; class 435, subclass 69.1, 320.1, 252.3, 440+; class 536, subclass 23.5

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of making. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the protein product of Invention I can be made by another materially distinct processes such as by chemical synthesis. Therefore, the inventions are distinct.

Inventions I and III are related as product and process of making. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In

the instant case, the protein product of Invention I can be made by another materially distinct processes, such as purification from the natural source or by chemical synthesis. Therefore, the inventions are distinct.

Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the solubilizer of group II is not necessary for the practice of invention of III. Therefore the inventions are distinct.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See “Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35

right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently filed petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(h).

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

A telephone call was made to Attorney Lisa Hemmendinger on March 27 2004 to request an oral election to the above restriction requirement, but did not result in an election being made.

### ***Inquiries***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rita Mitra whose telephone number is (571) 272-0954. The Examiner can normally be reached from 9:30 a.m. to 6:30 p.m. on weekdays. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Christopher Low, can be reached at (571) 272-0951. Papers related to this

Papers should be faxed to Technology Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Fax Center number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-0547.



Rita Mitra, Ph.D.

April 21, 2004



CHRISTOPHER S. F. LOW  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600